

CLAIMS

What is claimed is:

- 1 1. A backplane apparatus comprising:
2 a common bus comprising a plurality of signal lines, each signal
3 line of the common bus having a current limiting element, RA; and
4 isolation circuitry for electrically coupling each of the plurality of
5 signal lines of the common bus to a corresponding plurality of signal lines
6 of an electronic device to enable communication between the common
7 bus and the electronic device through the isolation circuitry.
- 1 2. The apparatus of claim 1 further comprising:
2 a connector for removably coupling the plurality of signal lines of
3 the electronic device to the plurality of signal lines of the common bus
4 through the isolation circuitry.
- 1 3. The apparatus of claim 1 wherein the isolation circuitry for each
2 signal line comprises an inline resistor, RD.
- 1 4. The apparatus of claim 3 wherein RD has a value in a range of
2 approximately 1 K Ω to 25 K Ω .
- 1 5. The apparatus of claim 1 wherein isolation circuitry for at least one
2 of the signal lines further comprises a pull up resistor.
- 1 6. The apparatus of claim 5 wherein the isolation circuitry further
2 comprises an inline resistor, RD.
- 1 7. The apparatus of claim 6 wherein RA has a value in a range of
2 approximately 10 Ω to 5 K Ω .

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1 8. The apparatus of claim 1 wherein isolation circuitry for at least one
2 signal line has no pull up resistor.

1 9. The apparatus of claim 1 wherein the isolation circuitry comprises
2 passive components.

1 10. The apparatus of claim 1 wherein the isolation circuitry comprises
2 active components.

1 11. The apparatus of claim 1 wherein the electronic device is a disk
2 drive.

1 12. A backplane apparatus comprising:
2 a common bus comprising a plurality of signal lines, each signal
3 line having a first current limiting element, RA; and
4 isolation circuitry electrically coupling each of the plurality of signal
5 lines of the common bus to a corresponding plurality of electronic devices,
6 each device having a corresponding plurality of signal lines to enable
7 communication of signals between the common bus and each of the
8 plurality of devices.

1 13. The apparatus of claim 12 further comprising:
2 a plurality of connectors for removably coupling the plurality of
3 signal lines of each electronic device to the corresponding plurality of
4 signal lines of the common bus through the isolation circuitry.

1 14. The apparatus of claim 12 wherein the isolation circuitry coupling
2 the corresponding signal lines comprises an inline resistor, RD, for each
3 signal line.

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- 1 15. The apparatus of claim 14 wherein RD has a value in a range of
2 approximately 1 K Ω to 25 K Ω .
- 1 16. The apparatus of claim 14 wherein isolation circuitry for at least one
2 of the signal lines further comprises a pull up resistor.
- 1 17. The apparatus of claim 16 wherein RD has a value less than 1 K Ω .
- 1 18. The apparatus of claim 12 wherein RA for each selected signal line
2 of the common bus is selected to have a value in a range of 10 Ω to 5 K Ω .
- 1 19. The apparatus of claim 12 wherein isolation circuitry for at least one
2 signal line has no pull up resistor.
- 1 20. The apparatus of claim 12 wherein the electronic devices include
2 disk drives.

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